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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,268	05/31/2001	Man Tai Vincent Lam	2030.42	2199

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EXAMINER

GRIER, LAURA A

ART UNIT PAPER NUMBER

2615

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/871,268	Applicant(s) VINCENT LAM, MAN TAI	
	Examiner Laura A. Grier	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7, 9-10, 12-15, 17, 19-20 and 32- 34 and 36-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,12-17,19,20,32,34,36 and 37 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,9 and 10 is/are rejected.
- 7) ☐ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2615

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: line 11, the word, "on" should be -- one --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al., U. S. Patent No. 6178317 in view of Broton, U. S. Patent No., 4380822.

Regarding claim 1, Kroeger et al. (herein, Kroeger) discloses a modulator (160) coupled to an oscillator (162), which indicates modulating a first channel with a first carrier frequency; a another modulator (164) coupled to another oscillator (166), which indicates modulating a second channel with a second carrier frequency, the signals are summed together and are output through an antenna (172) and transmitted to receiver, which separates the signals, therein, which reads on transmitting and regenerating, therein as claimed (col. 3, lines 58-67 and col. 5, lines 1-22). However, Kroeger fails to disclose coupling the combined signals from a high isolation combiner coupled to a single antenna.

Regarding coupling the combined signals from a high isolation combiner coupled to a single antenna., in similar field of endeavor, Broton discloses a transmitter/receiver, which includes a combiner circuit (120) – (col. 2, lines 51-col. 3, lines 1-4).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kroeger by implementing a combiner circuit for the purpose of enabling adequate radio frequency isolation as taught by Broton.

4. Regarding claim 2, Kroeger discloses an oscillator (162) coupled to a modulator (160), which obviously indicates a first voltage control oscillator; another oscillator (162) coupled to modulator (164), which obviously indicates a second voltage control oscillator modulator; the signals are summed together and are output through an antenna (172) and transmitted to receiver, therein as claimed (col. 3, lines 58-67 and col. 5, lines 1-22). However, Kroeger fails to disclose a high isolation combiner coupled combine the first and second modulate carrier signals to a single antenna.

Regarding a high isolation combiner coupled to a single antenna., in similar field of endeavor, Broton discloses a transmitter/receiver, which includes a combiner circuit (120) – (col. 2, lines 51-col. 3, lines 1-4).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kroeger by implementing a combiner circuit for the purpose of enabling adequate radio frequency isolation as taught by Broton.

Regarding claim 4, Kroeger and Broton disclose everything claimed as applied above (see claim 2). However, Kroeger and Broton fail to disclose a dielectric resonator oscillator. The use of dielectric resonator oscillator was well known. Thus, it would have been obvious to one

Art Unit: 2615

of the ordinary skill in the art at the time the invention was made to modify the invention of Kroeger and Broton by implementing a dielectric resonator oscillator for the purpose of providing optimal stability.

Regarding claim 9, Kroeger and Broton disclose everything claimed as applied above (see claim 2). Kroeger and Broton (Kroeger) obviously indicate an analog audio signal as evident by the audio source (110) and signal being converted via D/A converter in the receiver.

Regarding claim 10, Kroeger and Broton disclose everything claimed as applied above (see claim 2). Kroeger and Broton (Kroeger) disclose the signal being between 50Hz to 20kHz (figure 7 and 9).

Allowable Subject Matter

5. Claims 7, 12-17, 19-20, 32, 34, 36-37 are allowed.
6. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-4, 7, 9-10, 12-15, 17, 19-20 and 32-, 34 and 36-37 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially argues the prior art of record failing to disclose the claimed invention in respect to the high isolation combiner. A new art rejection has been provided that

Art Unit: 2615

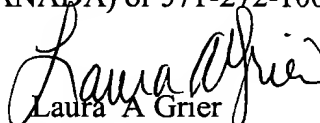
provides of modulation of a 1st and 2nd carrier signal, and combining means for providing RF isolation between a transmitter and receiver.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A. Grier whose telephone number is (571) 272-7518. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Laura A Grier
Primary Examiner
Art Unit 2615

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